



# The Impact of Covid-19 Pandemic on the Global Trade

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## Abstract

Human being is currently dealing with a pandemic known as COVID-19, a highly contagious pandemic with unprecedented health crisis worldwide. This crisis has seriously affected communications, jobs, manufactures, commerce, consumption and human life. Affected international transport sector resulted in the disruptions of shipping, along with the new policies toward economy, travel restriction and border shutdowns, led to a dramatic increase in the trade costs. In the first quarter of 2020, this had a significant impact on global trade. This paper is utilizing an analytical methodology that aggregates, collects and categorizes relevant domestic and international reports on the COVID-19 pandemic, government policies, the degree of uncertainty of economic policies and its effect on trade costs. In the present study, we first brightly described the travel restriction measures taken by WTO members, secondly, the impact of the COVID-19 pandemic on trade costs, government pandemic response policies in the early stages of the COVID-19 pandemic were discussed ultimately we analyzed the effect of the significant increased trade costs on the global trade and its relevant roots. In this paper we used an integrated analysis method to collect and classify domestic and international reports on the COVID-19 pandemic through reports of WTO and the member countries.

**Keywords:** COVID-19 pandemic, Impact, commercial costs, global trade

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## 1. Introduction

The global economic crisis is a huge impact on the world economy. Due to the border restrictions and closures, a sharp drop in foreign direct investment (FDI), and other capital flows consequently, World trade is experiencing an unprecedented level of crisis in 2020. The COVID-19 pandemic has spread at an alarming rate, infecting millions of people and bringing economic activities near to a standstill. The current COVID-19 is leading to a global economic recession that has severely disrupted transformation and economic growth in countries around the world, endangering the livelihoods of societies and people.

International trade and investment have always relied on the transmission of individuals and goods across borders. Direct contact plays an important role in establishing cooperation in international trade and commercial goods services as physical proximity between producers and consumers is essential for many types of trade in services. With the purpose of preventing the spread of the COVID-19 pandemic, governments around the world have imposed policies on travel restriction or social isolation, and the measures to protect public health, but these made a serious impact on personal mobility and movement, nonetheless strongly limiting cross-border trade, the COVID-19 pandemic has shown more important and clearer role of mobility in international trade.

## 2. Literature review

Trade costs have always been an issue of interest to economists: Samuelson (1954), in an analysis of trade costs under the "iceberg" model. In the "iceberg" model, the cost of transporting goods corresponds to the quantity of goods. Reed (1976) has made a greater progress in commercial cost modeling theory. He believes that transport is a necessary service for international trade. Hummel's and Skiba (2004) assume that transportation costs are "the shape of the iceberg, proportional to the volume of the cargo".

Eichengreen and Irwin (2009) studied the role of trade policy in times of recession. They proved that the Great Depression was marked by a serious outbreak of trade protectionist policies.

Bems et al. (2013) pointed out that the cause of the international trade collapse in the 2008-2009 global recession was the collapse in total spending. In addition, the impact on the supply of credit limited the supply of exports, further exacerbating the decline in trade. Most evidences suggest that previous crises had little impact on trade policy. In contrast, during the economic crisis by the COVID-19 pandemic that pushed up the costs of trade, the disruption of goods, disruption of personal and professional travel, non-trade policies, levels of uncertainty the COVID-19 pandemic has a significant impact on global trade.

On the other hand, since the end of the financial crisis, politicians have placed primary attention in the discussion about the degree of uncertainty in economic policies, which is often as a measure of global economic recovery after crises (Moore, 2017). To date, many theoretical and empirical documents have clearly

affirmed that increased uncertainty in economic policies has the potential to harm economic activity (Bloom, 2009).

Kumano (2020) argues that the recession caused by the COVID-19 pandemic is different from the past economic recessions such as the Lehman Shock in which people did not have enough money to buy products. In the case of the economic recession of COVID-19, there is a huge anxiety over the decrease in exports and production, business profits, employment and wages, and consumption.

Although there are many studies on the impact of previous economic downturns on business costs illustrating that business costs have affected the production and consumption decisions of global economic entities, there is no in-depth research on the impact of business costs on global business. This article delves more deeply into the 2020 recession caused by COVID-19, with its highly contagious nature that seriously effects on public health, that has led to draconian measures to restrict travel and to block borders, with a sharp rise in the cost of trade, and hammers global trade in result. In addition, this study provides an overview of the impact of COVID-19 pandemic on trade costs.

### 3. Research methodology

Based on WTO database and the policies of WTO member countries responding to the COVID-19 pandemic in the early outbreak and analysis of trade costs, commodity disruptions personal and professional travel disruptions. We collected synthesized and classified relevant WTO reports on the COVID-19 pandemic in relation to trade costs.

Based on the analysis of past economic recessions, trade cost policy and the degree of uncertainty about the COVID-19 epidemic have affected the rise and fall of trade costs, which is a major threat to global trade.

### 4. Research results

#### 4.1. Transportation and travel costs

Travel restriction is one of the policies adopted by governments to limit the spread of COVID-19, and WTO members have taken temporary measures related to travel restrictions, such as border closures, health quarantine and social isolation. These measures comply with individual entry restrictions temporary entry restrictions on all non-resident travellers restrict all non-essential foreign travel and postpone or even cancel international business meetings. Mandatory regulations and official requirements for individuals are medical examination or quarantine at the time of entry, temporary closure of consulates, embassies etc. Moreover, some states imposed border entry restrictions on people and goods on the early days of COVID-19. On 1<sup>st</sup> January 2020, the World Health Organization (WHO) recommended the imposition of travel restrictions in countries encountering public health emergencies and expressed concern about the effectiveness of the COVID-19 response together with the negative economic consequences of COVID-19. However, WHO recently recommended that quarantine measures can be applied in the early stages of the outbreak to give countries enough time for effective preparation measures. All these restrictive approaches are supposed to protect and minimize the impact of COVID-19 on public health. The restrictions on exposure and social isolation have significantly impacted trade in tourism commodities, particularly on transport costs and international trade during COVID-19 pandemic. The current problem for global trade is the cost of trade, which represents only 10 to 15 per cent of the value of goods compared with previous crises nonetheless it has risen by 50 per cent due to the severe impact of COVID-19 according to WTO statistical analysis in April 2020. This is a huge challenge for either manufacturers or global trade.

Transportation and travel costs make up a significant part of the trade costs in all sectors (Figure 1). Trade costs include freight, diplomatic business travel costs, and shipping time costs. According to the WTO report, the cost of transport and travel accounts for 33% of the trade costs involving cross-border transportation and other specialized transportation services.

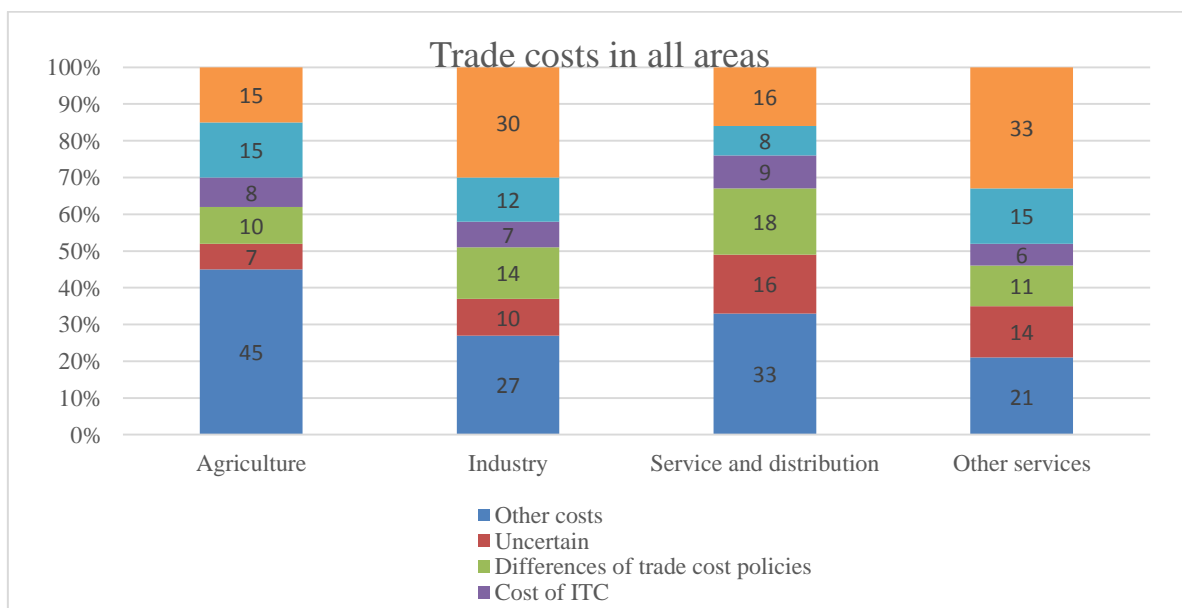


Figure 1: Trade costs in all sectors  
Source: World Trade Organization (2020)

COVID-19 pandemic has disrupted international trade around the world. Transportation is among the most important services in the world, which has seriously affected the smooth operation of the supply chain. According to the WTO report, most countries have begun to close their borders since early March 2020 (figure 2), more than 150 countries have applied some form of travel restrictions including screening, quarantine and travel bans in high risk areas. Since the Pandemic extended, border closures and travel

or trade restrictions against COVID-19 in developing countries resulted in a 30% drop in transport efficiency in the first quarter of 2020 compared with the same period in 2019, with further reductions in April 2020 and May 2020. Transport services, including sea, road, air and rail, have been severely affected by COVID-19. The impact of COVID-19 on the transport sector had a significant impact on the individual travel and diplomacy.

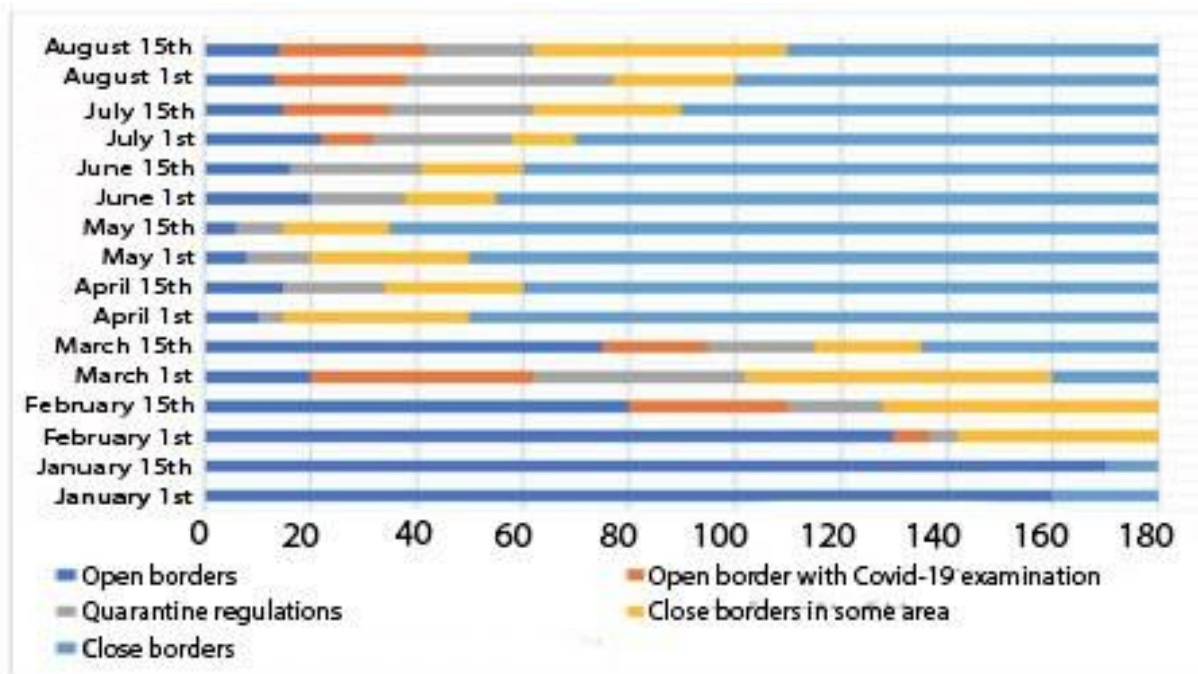


Figure 2: Countries with block borders and travel restrictions  
Source: World Trade Organization (2020)

**4.2. Transportation interruption**

The COVID-19 pandemic has seriously affected the air transport industry. According to the International Civil Aviation Organization (ICAO), global passenger traffic fell by 80% between April and May 2020 compared with January and February 2020, resulting in a drop of \$244 billion to \$420 billion in airline revenues. The international transport capacity and revenue were seriously affected in Europe and the Asia-pacific region, followed by North America, because in March and April 2020, north American canceled flights, closed the airports, restricted travels, and shut down the state borders, causing more than 1.6 billion passengers to cancel flights worldwide with more than \$35 billion revenue losses. The number of monthly international scheduled flights decreased by approximately 28.7% compared to the same period in 2019. In the first quarter of 2020, there were 69.9% fewer scheduled flights than in the first quarter of 2019. Travel restrictions caused 30% increase in the cost of air travel in April 2020 than in January 2020. According to data reported by the international transport organization in February 2020, cargo flights have decreased by about 21% compared to the same period last year, by the end of March 2020, there were mainly return flights to avoid pandemic COVID-19. Nevertheless, ICAO noted that 65 per cent of commercial air cargo was not transported due to limited flights in March and April 2020, resulting in a serious decline in air transport capacity. According to the statistics of the International Air Transport Association (IATA) from March 2019 to March

2020, the global air transport has decreased by 19%, the total air traffic output is only 4 million tons, In May 2020 almost all passenger flights were canceled due to the outbreak of COVID-19 globally. This pandemic has disrupted and impeded air transport. In response to this stagnation, airlines have begun to offer round-trip flights by expanding the use of passenger aircraft for cargo, but the current air transport capacity still does not meet the demand for cargo transport. As a result, air freight rates have risen sharply, estimated at around 20% to 30% across the Asia-Pacific region and up to 50% for some European and American routes (Figure 3). Transportation had delay as cargo had to wait for arrangements and health checks on pilots and staff.

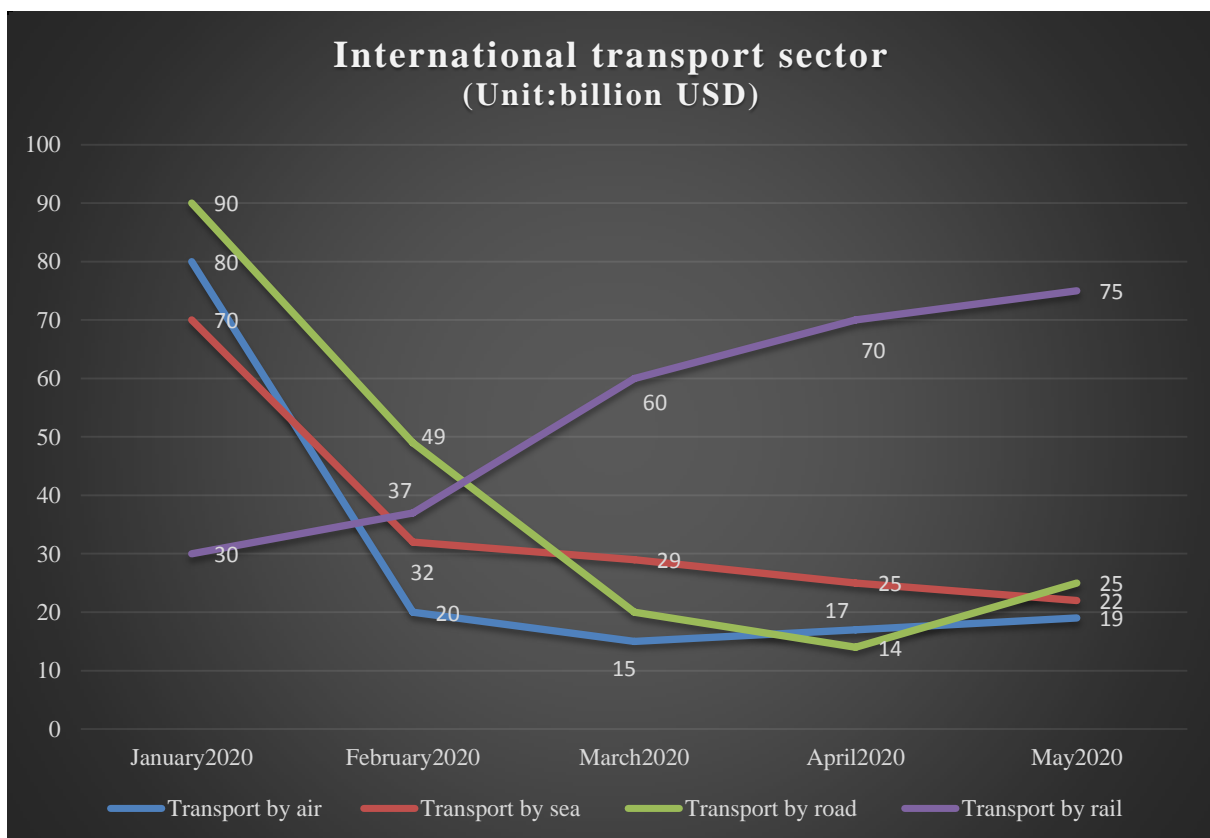
Thus far it has been shown that the air transport industry is heavily affected by border restrictions and closures resulting in higher costs and a significant impact on global trade. Compared with the previous crises that were largely due to the supply-demand crisis, they have little impact on transportation costs, but 2020 crisis had a strong impact on aviation industry, particularly air transport. In less than 3 months, trade costs have risen rapidly to 50%, according to WTO forecasts; if the covid epidemic is not controlled and continues to explode, trade costs will probably increase 60% in the following months. The disruption by COVID-19 has led to the suspension of air transport due to strict health and quarantine measures and water cups, causing difficulties for crew and staff, as well as extending entry time, making it difficult for them to go through customs formalities.



**Figure 3: Air freight trade costs in 2020**  
**Source: World Trade Organization (2020)**

Sea Freight: According to the statistics of DCSA (Digital Container Shipping Association), nearly 70% of trade is sea transport. As seen in Figure 4 the total volume transported in January 2020 is 70% but Gradually declined in February, March

and April until May in which there is no sign of recovery, it is clear that sea shipping disruptions is damaging trade flows and disrupting supply chains.



**Figure 4: International transportation industry**  
**Source: International Federation of Freight Forwarders Associations (2020)**

According to International Federation of Freight Forwarders Associations (FIATA), trips limit crew changes by up to 20% for container ships compared to previous years, on the other hand, the health and quarantine procedures and isolation imposed against the crew led to delays and extended the import time, nonetheless led to serious staff shortage to handle cargo, as most of the containers are

stored in the border areas, due to the pressure of lack of staff to handle and transport, this situation caused a 20% increase in shipping costs between May and June 2020 up compared to January 2020, FIATA said that if this situation continues to occur and is not solved, it is predicted that by August 2020,

transportation costs will increase by 60% compared to January 2020.

**Road transport:** The trucking sector is essential to economic and social development, while ensuring legal and inter-state transport. Road traffic declined sharply in March and April 2020, with no sign of recovery in May 2020 (figure 4). Thus, the ongoing COVID-19 pandemic has severely limited international road transport activities. This incredible change has led to congestion with inflation from 40% to 50%. COVID-19 restriction policies in many countries around the world have imposed restrictive policies for domestic transport or close border crossing for road freight services to limit the spread of COVID-19. Disrupting road transport supply chains led to severe transport shortages that disrupt global supply chains. According to the International Road Transport Union (IRU), almost 70% of trucks are stuck in warehouses because of a lack of drivers, leaving them without work. The scarcity of drivers also led to a 40% increase in transportation costs in April 2020 with road transport costs expected to rise by 60% in the following months if the driver shortage is not solved in time.

**Rail transport:** Railway is one of the modes of transportation less affected by the COVID-19 pandemic, so many businesses and manufacturers choose to transport their goods by train due to the advantages of large volume and low transport costs. In addition, rail transport requires fewer drivers, so medical quarantine procedures are faster. As a result, rail transport increased by 70% in transport production in May 2020 (Figure 4).

The above analysis shows that the impact of COVID-19 has had a strong impact on trade costs through severe disruption of the transport sector by restrictive measures, border closure and medical quarantine, and subsequently delays and prolongs of customs time.

#### 4.3. Individual and Business Travel Disruption

Interpersonal communication builds a good foundation for current and future relationship, this makes business travel so important. Regarding international trade, individual work is also an important factor contributing to a smooth-running international trade, but under the influence of COVID-19, all individual work activities, inter-industry with close person-to-person contact almost are completely paralyzed due to social restraints and prohibitions. According to the WTO statistics report, COVID-19 affected 80% of individual travel and business activities, accordingly personal communication can be established through trending technologies, however, it only partially helps human interaction quickly but not urgently, for instance, in the case of some technical problems or issues, face to face interaction is extremely important for engineers and managers. Thus, face-to-face meetings are critical in business dealings and decision-making. There are many businesses and managers that would not sign any contracts without face-to-face meetings between leaders. Therefore, the impact of COVID-19 on the travel and works involving personal interaction is very serious. The solution to this problem relies on the level of Information and Communication Technology (ICT) and the infrastructure needs of each country, as ICT networks also encountering a surge in traffic. However, it is important that communication through technology cannot replace actual communication. Business and personal travels are still the best way to create partnerships and drive business opportunities.

On the other hand, the disruption and restriction of personal travel to prevent the spread of COVID-19 have contributed to the global economic crisis and have had a devastating impact on the livelihoods of millions of people due to the increased travel and

transport costs that have led to a sharp increase in consumption costs.

COVID-19 limits business travel, as well as personal travel. Due to the interruption of international aviation in the COVID-19 crisis, Tourism industry became the most directly affected, since March 8, 2020, international airlines have disrupted flights, tourist sites and attractions have been closed, major festivals and events have been cancelled or postponed, and public gatherings (indoor and outdoor) in many countries have been restricted. Globally, tourism accounts for a 1/4 of all jobs created in the past five years and is estimated to account for 10% of economic output. In recent years tourism has become an especially important source of economic growth for many developing countries, for example in some South Asian and Central American economies that contribute more than one third of GDP. The COVID-19 pandemic created an unprecedented crisis in the tourism industry. In March 2020, the international tourism industry recorded the worst results in terms of tourist arrivals and profits, particularly for countries that their economy depends on tourism have moved from growth to vulnerability. For example, according to a report by the National Tourism Administration of Vanuatu, where tourism accounts for 40% of GDP, 70% of the tourism industry has been lost since March 2020, according to the report in April 2020. In Tanzania, according to statistics in May 2020, the number of tourists visiting Serengeti National Park has decreased from 6,000 to 24 per day. In the Rwanda country about 20 scheduled workshops and conferences in March 2002 and April 2020 are expected to generate around \$ 8 million for the delayed economy due to travel restrictions. The impact of COVID-19 on global tourism is very serious, according to the WTO report, it will take a long time for the impact of COVID-19 on tourism to regain its balance.

#### 4.4. Differences of trade cost policies

COVID-19 affected majority of businesses and major economies in the world either directly or indirectly. WTO estimates suggested that trade policy barriers, regulatory differences between policies and cross-border transport costs still account for at least 10% of trade costs in all sectors, these include tariff and non-tariff measures as well as temporary trade barriers, and etc.

The COVID-19 pandemic is the most serious threat to the global economy since 1930. A sudden collapse in economic activity is evident when the major economies in the world in China, the United States, and other countries dropped sharply in global GDP in January and February 2020. This is the second decline in global output since the 2008 global financial crisis, but the economic crisis caused by COVID-19 is far worse than the financial crisis of 2008, as economic growth slowed and international political relations become strained. Social unrest is also increasing in many countries. In 2020, the risk of economic derailment led to the policy instability between countries, strong growth of tradism, and increase in trade costs. Unlike in 2008-09, the global economic crisis caused by COVID-19 has been driven by massive government isolation policies. Strict social control has created negative supply and demand shocks, moreover, the speed of economic recession in 2020 also exceeded that of 2008–2009. The COVID-19 epidemic is still spreading around the world, seriously affecting international trade, and causing concerns for the governments to establish management policies in order to overcome this epidemic, therefore, governments have developed Personal Protective Equipment (PPE) such as breathing apparatus, respirators, and etc. In addition, export restrictions on COVID-19 are putting critical commodities at risk. Other policy differences such as non-tariff controls, restrictions on business and cross-

border shipping, documentation and customs compliance requirements, and The long-term policy and time delays have strongly risen up trade costs, according to the WTO report by the end of April 2020, at least 74 economies issued export bans or restrictions. In fact, empirical evidence suggests that visa restrictions have a negative impact on both trade and foreign direct investment (FDI), impeding trade in the international trading environment. For example, unilateral border restrictions are estimated to reduce bilateral trade by 19% and FDI by 25%. At the same time, WTO has identified the impact of the pandemic and measures to respond to the pandemic are extremely urgent for the countries. the WTO has predicted that global trade will decline from 13% to 32% in 2020 due to the direct effects of the pandemic, which depletes both supply and demand. Nevertheless, the WTO assumes that restrictions on different policies will also contribute to higher trade costs in the future. Furthermore, the WTO indicated that government policy options can reduce or increase the uncertainty of trade policy in shaping trade costs associated with future uncertainty.

#### **4.5. The level of uncertainty about the COVID 19 pandemic impacted trade costs**

The economic crisis caused by the COVID-19 pandemic was sudden and unpredictable. Due to the unexpected nature and unpredictable consequences, managers have developed indicators of COVID-19 uncertainty. This uncertainty often complicates countries' policies, decisions and emergency warning notices, so depending on each country's chosen policy, trade costs can increase or decrease. According to the WTO report, the current level of uncertainty over COVID-19 has increased trade costs by 50%. The COVID-19 epidemic continues, and individual and overall social instability continues to increase. According to Worldometers.info, as of 9 o'clock on July 6, 2020, 11,555,414 people worldwide are infected with COVID-19; 536,720 people died. COVID-19 has been reported in 213 countries and territories, suggesting that the prevalence of COVID-19 may still be increasing. These data show that uncertainty over COVID-19 is very high, which could push the cost of trade up to 100% by November 10 (according to the WTO projections). On the other hand, the uncertainty of economic policies can reduce or increase the cost of trade, causing companies and enterprises to stop making investment, or affect their investment of companies and enterprises serving foreign markets or seeking international investment. Based on WTO report this uncertainty is a factor increasing existing trade costs, affecting trade finance flows, and reducing investment in exploring new markets. explore new markets. In the first quarter of 2020 the WTO report also indicated that the degree of uncertainty due to COVID-19 was 60%. This is higher than the instability in the Iraq War or the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 as governments have taken drastic measures to control the epidemic. The COVID-19 affected countries were immediately blocked and tightly quarantined and required to comply with quarantine rules. This had an immediate and huge impact on trade costs, causing a dramatic increase in costs that adversely affected international trade. The fear of COVID-19, on the other hand, has resulted in considerable instability and turmoil in many industries, especially in essential service industries, by the present governments and national organizations, actions are being taken to protect the financial system from the potential collapse of the COVID-19 pandemic but could exacerbate the food and consumer staple crisis or the exacerbation of the global trade crisis.

## **5. Conclusion**

In the context of the COVID-19 outbreak, countries' policies to restrict travel have had a strong impact on the cost of trade, resulting in a sharp rise in trade costs, mainly due to differences in transport costs, uncertainty over economic policies, disruption of individual travel and national policies in response to the COVID-19 epidemic. Mitigating the effects of the COVID-19 pandemic will therefore depend on the country's own ICT infrastructure.

Taken together, the COVID-19 epidemic has driven a surge in trade costs, in the form of trade protectionism, transport costs, tariff increases, and volatile trade policies, undermining investment activity and consumer demand for goods, and weakening global trade growth.

In the case of Vietnam, the restrictive policies have had a significant effect on trade in goods through transport services, information and transaction costs. Restricted transport services at the border, border controls, travel restrictions, health and quarantine requirements, and air, road and maritime quarantine requirements for all crew members have resulted in extended transport times, consequently caused congestion and delays in the transport of transit goods and ultimately led to a significant damage to the Vietnamese economy.

Vietnam has difficulty in importing non-pharmaceutical products, including food. These difficulties are causing great losses, especially for seasonal products. The travel restrictions have had an indirect impact on the transport sector, resulting in a sharp decline in Viet Nam's air transport capacity. These results have resulted in slower commodity transactions, higher costs and greater uncertainty, as well as an impact on the functioning of the global trade value chain. On the other hand, travel restrictions and border closures have had a negative impact on commodity transactions by hindering access to information. The gap between buyers and sellers created trade challenges and restricts transactions. According to surveys of consumer distributors in Vietnam, trade costs have risen by 10-50 per cent, making it difficult for Vietnamese companies to find business contracts. For enterprises producing essential goods, it is difficult for them to import raw materials for production, and the export work is also difficult due to limited travel between countries. In addition, the social gap in the country also reduces the volume of goods, reducing consumer demand. Some businesses that make non-essential items such as children's toys and souvenirs say Vietnam's social expansion policies have led to a sharp drop in consumer demand, with many businesses temporarily shutting down during the outbreak. Restaurants in Vietnam are heavily affected by the ban on mass concentration, causing revenue of the service industry to decrease by 30% compared to the same period in April 2019.

In order to limit the spread of COVID-19, the Vietnamese government introduced measures to limit travel and closed the border. Although individual cross-border movements are an important driving force for the development of trade in goods and services, for Vietnam the travel and entry of international individuals is always considered in the context of responsibility and protecting public health.

## **Data Availability**

The data, mostly secondary data, was collected based on the sources have been cited and presented in the study and references. Authors can access the data online.

## **Conflicts of Interests**

We - the authors declare that there is no conflict of interests regarding the publication of this paper.

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